

Overheating Adaptation Guide for Offices

Written by Shade the UK
Commissioned by Feldberg Capital



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Temperatures are rising in the UK. Each summer, we bare witness to the immense heat-related challenges facing the UK.

Despite the common use of air conditioning in offices in the UK, making buildings resilient to rising temperatures without over-reliance on mechanical cooling is increasingly important.

Air conditioning often fails during extreme heat, either because systems are not designed for higher temperatures or are poorly maintained. Rising temperatures drive up cooling demand and discomfort, which is unevenly felt across buildings due to inefficient systems and varying occupant sensitivities.

The Overheating Adaptation Guide for Offices has been prepared by Shade the UK, in collaboration with Feldberg Capital, to increase climate resilience of office buildings.

The guide works as a tool for both office landlords and tenants to understand the various overheating measures available to improve thermal comfort, reduce reliance on air conditioning, and improve the health and wellbeing of occupants.



Shade the UK is a Community Interest Company, aiming to adapt the built environment and public spaces to protect vulnerable populations against a changing climate.

The increasing frequency and intensity of heatwaves in the UK means more vulnerable people are dying due to the poor performance of our existing buildings and public spaces keeping people safe under extreme heat.

Shade the UK’s mission is to reach zero deaths from overheating in the UK and to ensure the health and wellbeing of vulnerable people is safeguarded during hot weather.

Feldberg Capital is an impact led real estate investment manager with offices in London, Frankfurt and Berlin.

Passionate about performance and determined to make a positive difference to the lives of people and the future of the planet, Feldberg Capital is a different kind of real estate investment manager.

With a diverse portfolio, including offices, Feldberg Capital has commissioned this guide to support tenants, building managers and other stakeholders in preparing their offices for rising temperatures to reduce costs, improve thermal comfort, and increase business resilience.



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Temperatures are rising in the UK. Our buildings are not currently built to withstand hot weather and this is only expected to worsen due to our changing climate.

The aim of this guide is to provide landlords, tenants, facilities teams, and office workers with a range of measures they can consider to reduce overheating risk in offices. Suitable measures can be found for all office building-types, including listed and non-listed buildings, as well as for different fit-out stages and budgets.

Introduction

Overheating in the office

As a result of climate change, Europe is heating up faster than any other continent¹, making the UK underprepared for rising temperatures. UK buildings have historically been constructed to favour heat retention and energy conservation, reflecting the country’s traditionally cooler climate and the need to reduce heating costs during the winter.

It is estimated that approximately 65% of office spaces in the UK are equipped with air conditioning². This is expected to rise as new offices are constructed and older stock refurbished. Despite this, air conditioning systems are prone to failure, and many are inefficient or poorly controlled. Therefore, office buildings must adapt to increasing temperatures, whether air conditioning is present or not.



This guide aims to reduce overheating in offices to:

- **Protect the health and wellbeing of occupants.**
- **Reduce reliance on air conditioning.**
- **Minimise energy bills.**

Key contributing factors to overheating within offices

Glazed facades

Excess glazing in offices leads to high ‘solar gains’, which is where sunlight passes through a window and warms up the interior environment. Floor-to-ceiling glazing has often been favoured within architectural design due to aesthetic reasons and to maximise internal daylight. Designing offices with an appropriate glazing area avoids excessive heat build up within rooms, improving thermal comfort for occupants.

Glazing orientation

East and south facing offices tend to overheat more as they are largely used during the day.

However, west facing offices are also highly problematic during hot periods if there is heat buildup throughout the day and no opportunities for cooling at night.

Lack of ventilation

Many modern office buildings also have restricted or no openable windows, often due to design choices or safety constraints. As a result, heat can build up indoors with little or no opportunity to escape, leaving occupants reliant on mechanical systems for relief.

Lack of external shade

External shade plays a key role in improving thermal comfort and reducing overheating risk as it stops the heat from entering the building in the first place. These include awnings, solar screens, balconies, louvres, shutters, green roofs, planters and more. External shade has historically been neglected when designing buildings in the UK as the focus has been on keeping the heat in rather than preventing the heat from entering.

Low ceilings

Heat naturally rises within a room, creating a ‘stratification’ effect where warmer air collects near the ceiling and cooler air remains closer to the floor. In spaces with high ceilings, this separation can provide some relief, but in rooms with low ceilings, limited stratification means heat is felt more directly, making the space feel warmer overall.

Internal heat gains

All electrical equipment within the office radiates heat, including the monitors, light bulbs, computers, kitchens etc. Upgrading any equipment to low energy and thermally efficient equipment, where possible, contributes to lower indoor temperatures. Also, people themselves radiate heat. Overcrowded offices or meeting rooms can increase internal temperatures significantly.

Reliance and control of air conditioning

Air conditioning in office buildings are often prone to breakdowns and inefficiencies, particularly during periods of high demand, such as heatwaves, when it is most needed. Also, the systems are often not within the tenant's control, so there is limited flexibility in managing indoor temperatures. Centralised systems may not respond quickly to changing occupancy patterns or other internal conditions, and tenants may be unable to adjust settings to suit their specific needs.

Impacts of overheating

Anyone can be vulnerable to overheating, which can lead to a multitude of serious health-related issues, but especially amongst more vulnerable employees or visitors. This includes, but is not limited to, those with underlying chronic health conditions, the elderly, and pregnant people.

Continuous exposure to heat can lead to heat cramps, heat exhaustion, and heat stress, which can increase hospitalisations and become fatal. In the July 2022 heatwave, over 3,000 heat-related deaths were estimated and is predicted to triple to around 7,000 in the next 30 years³.

User preferences

Differences in individual thermal preferences, where some employees naturally feel warmer and others colder, can lead to significant challenges in maintaining a comfortable environment for all. A single temperature setting may not suit everyone, so having no flexible controls or personal cooling strategies can result in discomfort, reduced productivity, and even tension among employees.

For businesses, high indoor temperatures at the office can lead to discomfort, fatigue, and reduced concentration, which in turn lowers productivity, increased absenteeism, and lower overall morale⁴.

Offices without adequate cooling or ventilation may also experience equipment malfunctions, such as overheating computers or servers. Additionally, energy demand spikes as air conditioning systems work harder, leading to higher operational costs and increased carbon emissions.

As heatwaves become more frequent, adapting office spaces to manage extreme heat must become a critical aspect of business resilience and protecting the health and wellbeing of office users.





Overheating Adaptation Guide

The aim of this guide is to provide office landlords and tenants with a range of measures they can install or implement in the office to reduce overheating. The intention is that suitable measures can be found for all office building-types, including listed and non-listed buildings, as well as for different fit-out stages and budgets.

The measures in this guide include **external measures**, **internal measures**, and **behavioural measures**. Furthermore, each measure is categorised by the following:

Suitability

Each measure will have icons to highlight whether they are suitable for either landlords or tenants.

For example, long-term measures which are typically difficult and costly to reverse are more suitable for landlords, either as part of a CAT A fit-out or to a leased space. Measures that can be adapted, reversed, or updated with moderate effort and cost can be more suitable for tenants, either for a CAT B fit-out or for existing tenants leasing a space.

Building type

Offices located in listed buildings must approach retrofitting for heat adaptation with particular care. Some adaptation measures may impact historic design elements that cannot be altered without Listed Building Consent or permission may be difficult to obtain.

Another icon will be used to illustrate if a measure is suitable for listed buildings or non-listed buildings within conservation areas. This guide only provides a general indication of whether a measure may be suitable; in reality, this is determined on a case-by-case basis with the local authority. Further guidance is provided by [Historic England⁵](#).



Landlord



Tenant

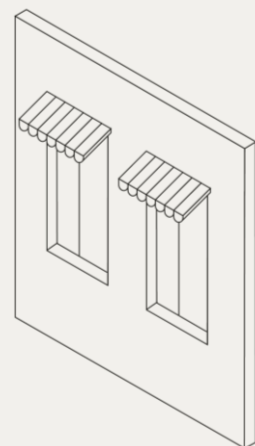


Suitable for listed buildings

External Measures

External measures refers to structures, either natural or human-made, placed outside the building to block or reduce the amount of direct sunlight entering through glazing. The most common types of external shade include awnings, solar screens, blinds, louvres, shutters, brise soleil, trees, and planters; a lot of which is commonly found in Mediterranean countries but are not commonplace within the UK.

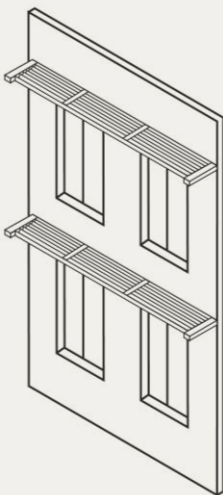
Shade



1 Install removable shading above, around, or on windows and doors

Shading options like awnings or detachable blinds can be put up when needed in the summer and removed when it gets colder, helping control the heat entering the office without making any significant changes.

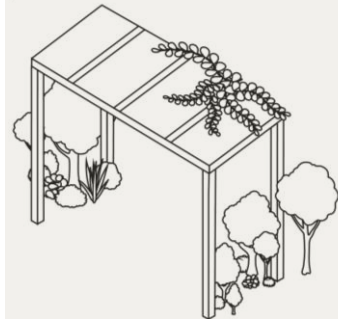
They are temporary and adjustable, making them a good option for tenants. However, being an external feature, they may still need approval for listed buildings. They may be more easily accepted as they are not a permanent feature.



2 Install fixed shading above, around, or on windows and doors

Fixed shading, lightweight aluminum or steel brise soleil, or overhangs provide constant protection from the sun. This shading blocks direct sunlight, so the office does not heat up as much during the day.

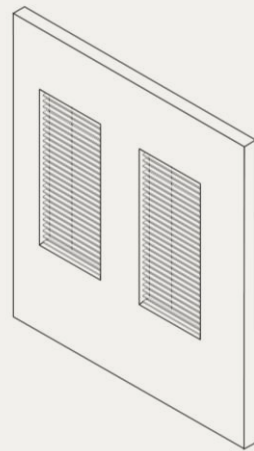
Similar to external shutters, they are a permanent façade design feature that falls under the landlord’s responsibility and it may be difficult to gain permission to install on a listed building.



3 Install a veranda with an opaque, light-coloured roof

A veranda is like an outdoor room attached to the main building. If it has a light-colored roof, it can reflect sunlight away, preventing the office from heating up. It’s a stylish and practical way to block the and provides a shaded outdoor area to work.

This is a permanent structure that a landlord can consider before leasing out to tenants.



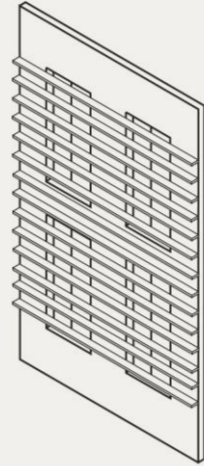
4 Install external shutters that are perforated and openable on windows and glazed doors

External shutters are particularly effective for east, south, and west facing office spaces by blocking direct sunlight, helping to keep interiors cool. Their ability to be adjusted throughout the day or in response to changing weather conditions makes them one of the most efficient passive solutions for mitigating overheating without relying on air conditioning. Perforated shutters are optimal to allow air flow even when the shutters are closed.

Installing external shutters is a major façade design decision that typically falls under the landlord’s responsibility. However, tenants may propose them as part of an office overheating adaptation strategy, subject to the landlord’s approval.

It may be difficult to gain permission to install external shutters on a listed building. However, there is growing leniency due to the increasing awareness of the overheating benefits of shutters. Historic England now states that external shutters are “*generally acceptable*” where they “*do not adversely impact on the architectural interest of the building*”.

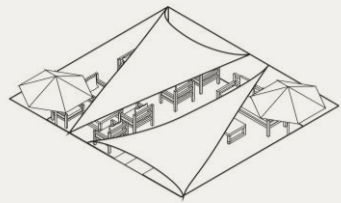




5 Retrofit vertical or horizontal louvres to windows exposed to direct sun

Louvres can be retrofitted either horizontally or vertically, depending on the window orientation. These louvres block or redirect intense sunlight before it enters the building, especially during peak sun hours, while still allowing natural light and views.

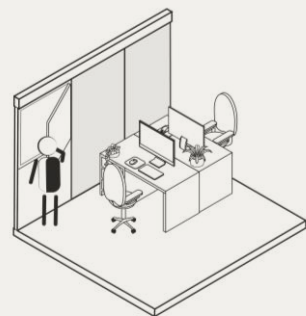
They are a permanent façade feature that typically falls under the landlord's responsibility and will be difficult to install on a listed building.



6 Put up a shade sail, canopy, umbrella or gazebo for external spaces

These are portable structures that can be set up outside office buildings to block direct sunlight. These solutions are well-suited for shading windows, terraces, or outdoor seating areas, offering a practical way to mitigate overheating without permanent alterations.

Their ease of installation and removal makes them ideal for tenants.



7 Replace high-glazing areas with insulated opaque, mesh, or perforated panels

Large glazed surfaces can allow excessive sunlight and heat to enter. The panels can be opaque, mesh, or perforated, depending on the level of light and views desired, and openable to allow ventilation.

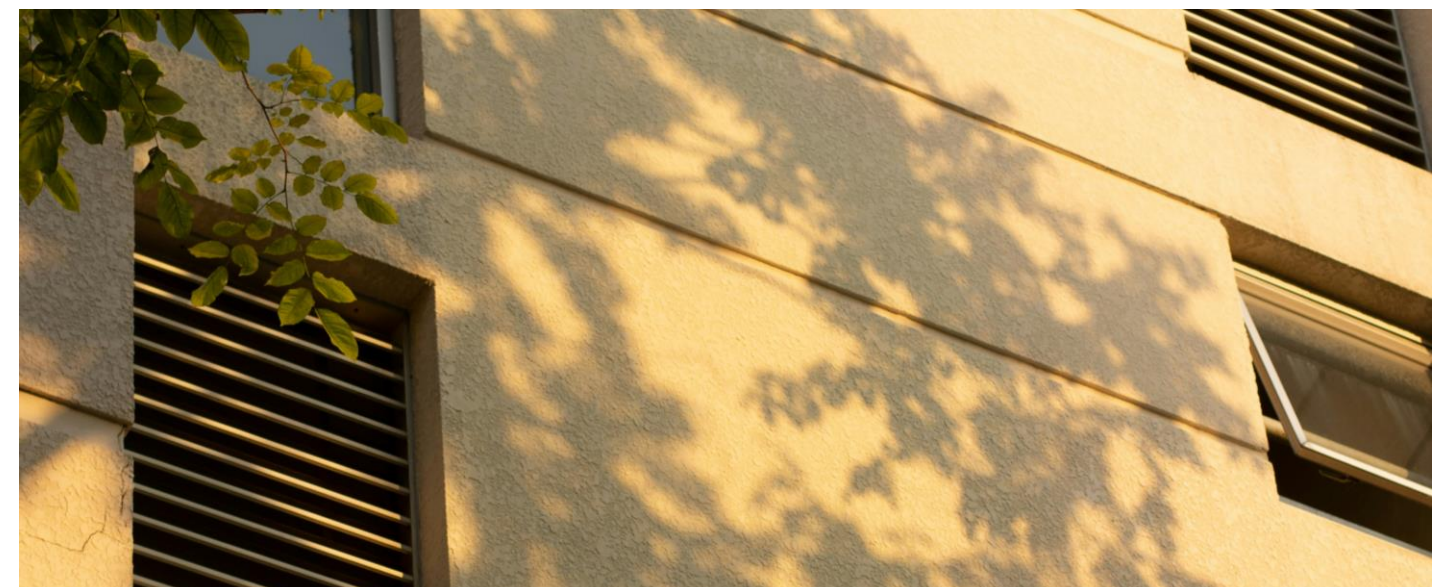
They are a permanent façade feature that typically falls under the landlord's responsibility and will be difficult to install on a listed building.



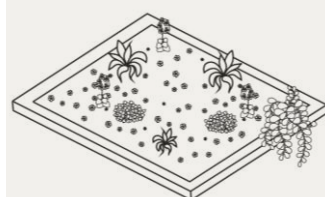
8 Install external motorised shade

Motorised blinds or louvres are an advanced solution for managing overheating in the office. They are equipped with sensors that monitor sunlight intensity and indoor temperature levels in real time. When conditions indicate excessive solar gain, the blinds or louvres automatically adjust, either by tilting or fully closing, to block direct sunlight from entering through the windows. Their integration into smart building systems also allows for seamless operation without manual intervention.

Similar to external shutters, they are a permanent feature that typically falls under the landlord's responsibility and it may be difficult to gain permission to install on a listed building.



Green Infrastructure



9 Opt for external surfaces like long grass, light-coloured stone, gravel, or wildflowers

Light-coloured or natural ground coverings reflect heat and cool the air around the office, reducing heat gain indoors.

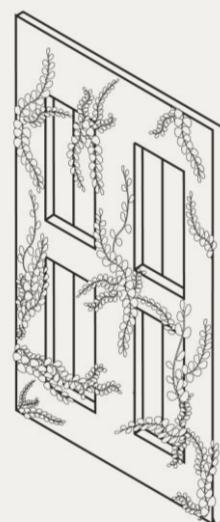
This is a permanent solution that involves altering the landscaping, meaning it's more feasible for landlords to carry out the works.



10 Plant trees and tall shrubs in external areas

Trees and shrubs provide natural shade by blocking direct sunlight. This helps keep the area around the office cooler and can significantly lower internal temperatures. Plus, as they grow, they release moisture into the air, which naturally cools down the surroundings.

Planting trees can be suitable for both landlords and tenants, although it may require landlord approval and coordination, especially if it involves shared areas and long-term maintenance.



11 Place trellises with fast-growing climbing plants around doors and windows

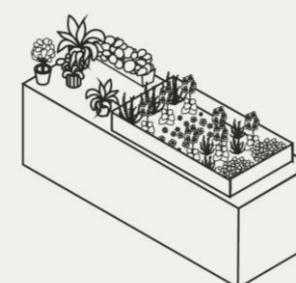
Climbing plants, like honeysuckle or jasmine, can quickly cover walls, doors, and windows. They act as a green curtain, blocking sunlight from heating up these surfaces. This not only cools the building down but also adds aesthetic value.

Using trellises make it easy to remove or relocate the plants, making it suitable for tenants. However, as they are an external feature, co-ordination with landlord may be required.



12 Plant tall, fast-growing plants close to walls and windows

Tall plants near your walls and windows provide another method of natural shade by blocking direct sunlight into the office. Whether in the ground or in pots, these plants can be a great way to stay cool. Planting in pots makes it a flexible option for tenants as well.



13 Install a green roof on flat or gently sloping roofs

Green roofs are highly effective in reducing overheating in buildings by absorbing sunlight and heat, preventing it from penetrating the building's structure. It can also act as insulation in the winter to regulate temperature all year round. This passive cooling method not only improves occupant thermal comfort but also reduces cooling demand.

Green roofs involve structural changes to the building fabric, long-term investment, and ongoing maintenance, which are responsibilities that fall under the landlord's remit.

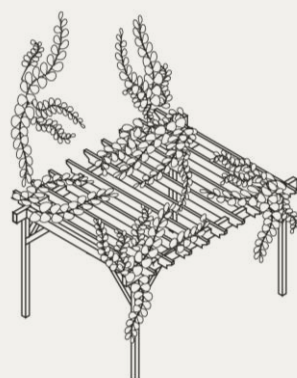
Typically, it is difficult to gain permission to install a green roof on a listed building. However, if the building structurally allows for one, there is growing leniency with heritage officers due to the multi-dimensional benefits of green roofs. There are notable examples of green roof installations on listed buildings, such as the Crown Estate's office building on Regent Street.





14 Place potted plants and shrubs on flat roofs, balconies, or gently sloping roofs

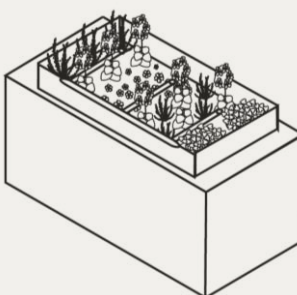
Potted plants on roofs and balconies are a more flexible and cheaper option than installing a green roof, making them suitable for tenants. The pots can also be moved around to where they're most needed.



15 Install a pergola close to or up against walls, windows, and doors

A pergola is an outdoor structure that can be placed outside the building to provide partial shade. By letting climbing plants grow on it, it becomes a green, cooling barrier that keeps the sun off the office walls and windows.

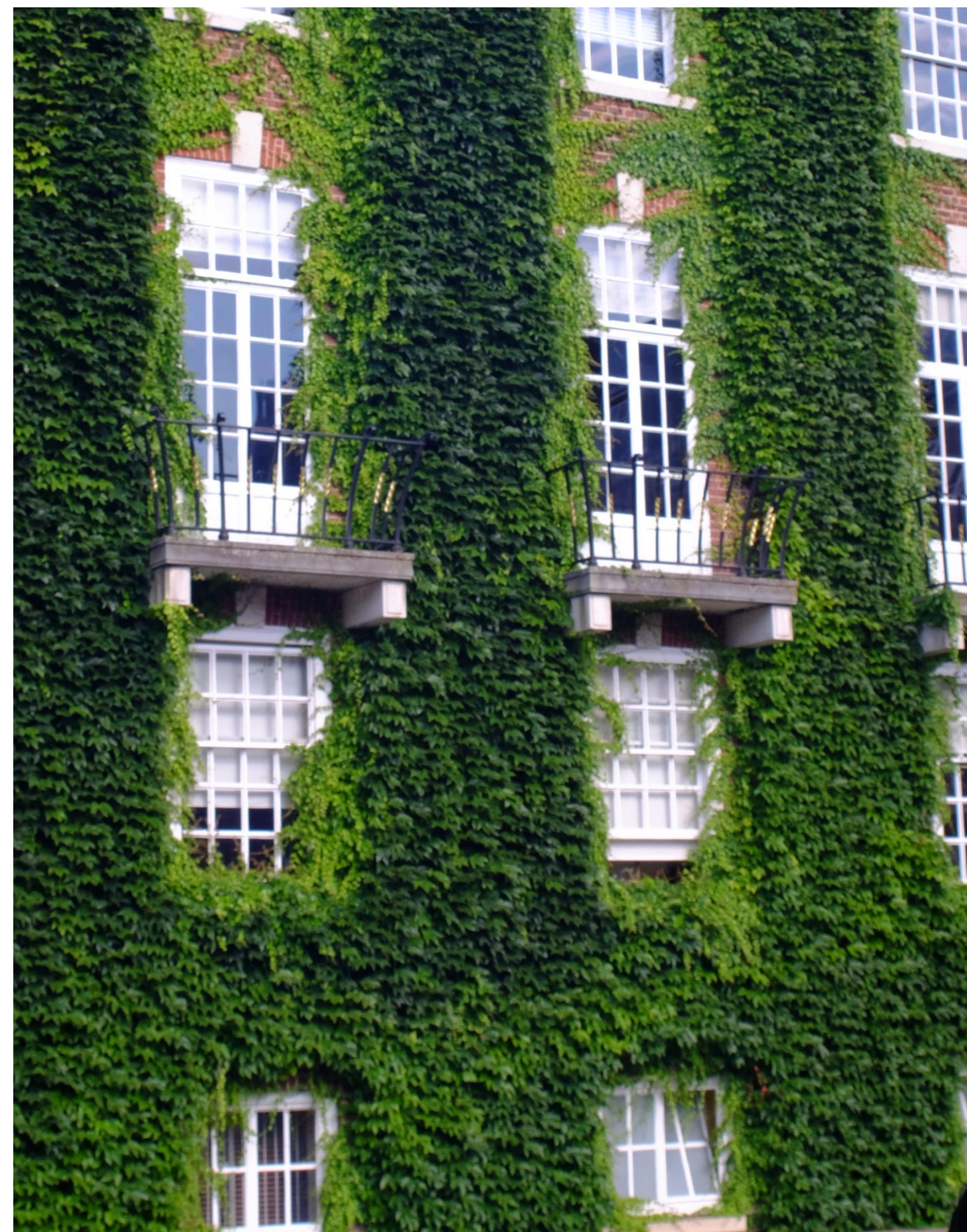
Since it's a large, permanent garden feature, it's better suited for landlords to install and maintain. As pergolas are not attached to the building, they should be suitable for listed buildings.



16 Set up an irrigation system for planting during hot, dry weather

An irrigation system automatically waters plants, keeping them healthy so that they can provide their maximum cooling benefit. This is especially useful during hot and dry periods.

Depending on the system, it can be set up temporarily, making it suitable for tenants.



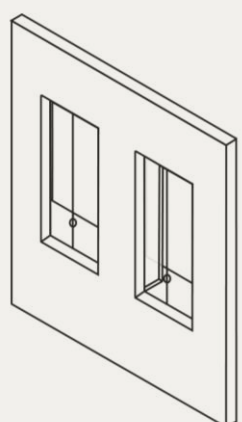
Windows & Materials



17 Install windows that can be easily opened and closed in a secure way

Modern offices typically have large, fixed glazing systems. Integrating openable panels into the fixed glazing allows for natural ventilation in office spaces, letting cooler air enter during the night and remove heat buildup from the day.

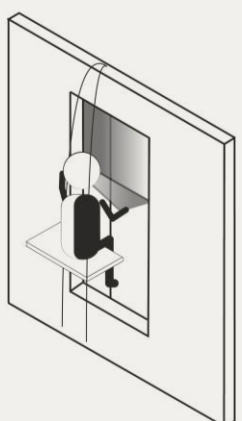
Window replacements involve changes to the building's external structure and façade. These works typically fall outside the scope of a Cat B fit-out for tenants and instead should be considered by the landlord.



18 Install windows that open outwards, acting as shade when combined with internal blinds

Windows that open outward can block the sun's rays, especially when used with internal blinds. This combination helps reduce heat from the sun while still allowing ventilation.

Window replacements typically fall under the landlord's responsibilities; however, if outwards window openings are already present, tenants can easily install blinds. Go to [Internal Shade](#) for more details.



19 Add a solar film to the outside of window panes

Solar film reduces the solar gain within a building without compromising daylight or views. Solar film with a low g-value between 0.20-0.40 is recommended for offices and ideally for east, south, and west facing glazing.

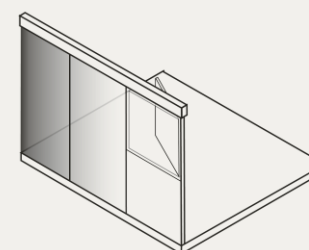
It's an effective method of preventing overheating without significantly changing the appearance of the windows, making it suitable for tenants with their landlord's permission and for listed buildings.



20 Install water-filled glass window panels in rooms with large areas of clear glazing

Water-filled glass panels have a cooling effect as sunlight passes through them, which can help reduce indoor temperatures in rooms with large windows but also adds an interesting design feature.

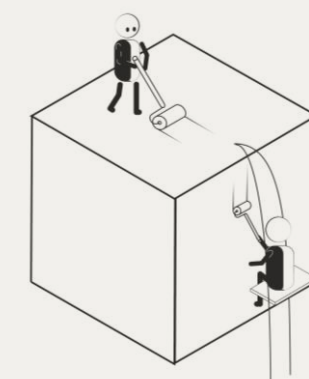
This requires specialised installation and is a permanent and significant design feature suitable for landlords.



21 Install electrochromic (smart) glass

Electrochromic, or smart glass, automatically responds to light and heat. When a small electric charge is applied, the glass darkens to block sunlight and reduce heat inside the building. This helps keep office spaces cooler and reduces glare without manual adjustments. This is particularly effective on high glazing areas.

This requires specialised installation and is a permanent and significant design feature suitable for landlords.

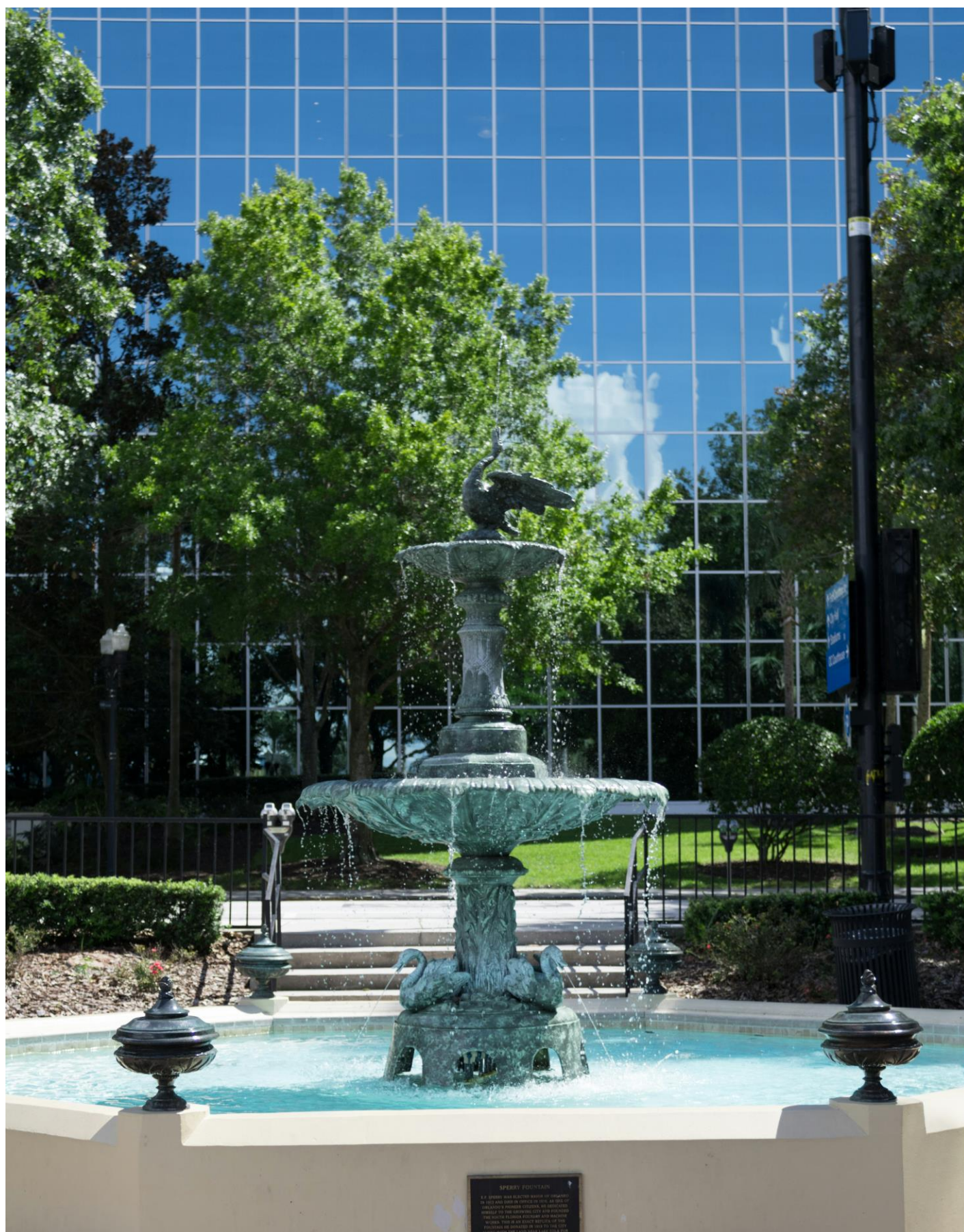


22 Cover dark-coloured roofs and external walls with light or solar reflective paint/materials

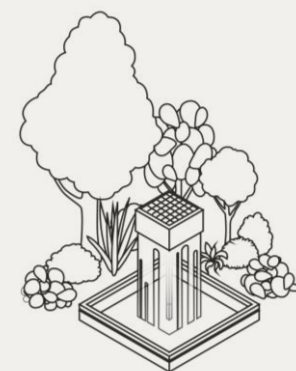
Dark colours absorb more heat, so painting roofs or external walls with light paint or reflective materials help reflect sunlight away from the building. This reduces the amount of heat the building absorbs, keeping it cooler inside.

It's a permanent and significant change to the exterior, making it suitable for landlords.





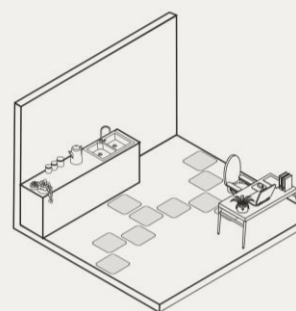
Outdoors



23 Consider adding a small solar-powered, efficient water feature

A water feature can cool the air as the water evaporates, creating a more comfortable outdoor environment, while adding a peaceful ambiance to the office. Additionally, having a solar powered feature means it's renewable and energy-efficient.

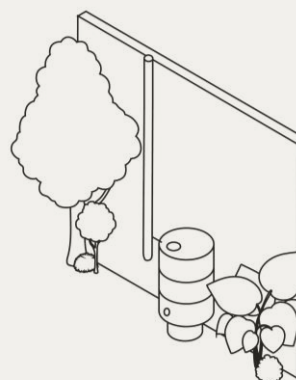
Portable water features can be placed on balconies or outdoor spaces, making it suitable for both landlords and tenants.



24 Opt for external floor and wall surfaces like ceramic tiles, stone, or exposed brickwork

Materials like ceramic tiles, stone, and exposed brickwork add thermal mass to the building and outdoor areas. These surfaces absorb heat during the day and release it slowly at night, which helps keep the building cooler in the summer and warmer in the winter.

This requires replacing existing floors or walls which is a significant modification suitable for landlords.



25 Install a water butt next to downpipes to collect rainwater

A water butt collects rainwater that can be used to water plants during dry periods. Keeping plants healthy and hydrated helps them cool the air more effectively.

This is a simple feature to set up and remove, making it tenant-friendly.



Internal Measures

Internal measures refer to structures or changes inside a building to manage the heat. In general, external shading is more effective than any internal measures, as it reduces the heat even entering the home; however, this may not be suitable for many buildings or tenants. Most of the following measures are catered towards tenants, either occupying a current office space or refurbishing a new space.

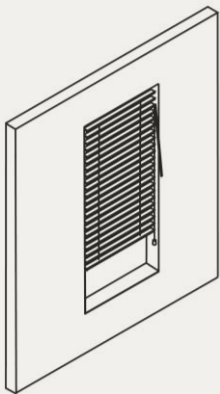
Internal Shade



26 Place leafy indoor plants by windows exposed to direct sunlight

Indoor plants can act as a natural filter for sunlight. When placed internally near windows, they help absorb some of the sun's heat and release moisture, which cools the air inside the office.

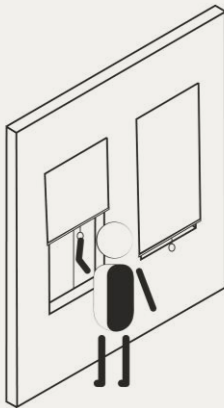
This is a simple and non-invasive cooling method, making it a perfect option for tenants.



27 Install blinds on windows exposed to direct sunlight

Blinds are a simple yet effective way to manage indoor temperatures.

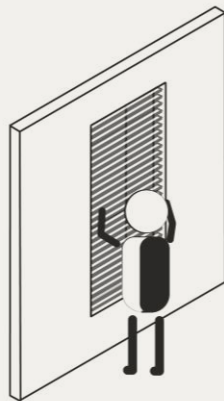
Blinds are easy to install and adjust, making them suitable for tenants. Landlords can also consider installing blinds for a CAT A fit-out before leasing out the space. Blinds are also usually treated as a window dressing, not a structural alteration, so they typically do not require listed building consent.



28 Fabric blackout blinds or curtains

Blackout blinds are made from thick fabric that block the majority of sunlight. Putting them up in the warmer months and taking them down when it's cooler helps manage the temperature inside the office more effectively.

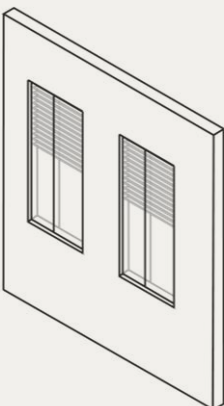
However, as blackout blinds impact daylight and views within an office, tenants may wish to consult with their employees, such as through a survey, to understand if blackout blinds can be used during heatwave periods.



29 Install internal shutters on windows exposed to direct sunlight

Internal shutters act as a barrier between office windows and the interior space, helping to block direct sunlight and reduce heat buildup.

As they can be installed with minimal impact to the building structure, internal shutters are a practical option for both landlords and tenants, especially in leased or listed office buildings where external changes may be restricted.



30 Replace window panes with integrated blinds and shade

Integrated blinds differ from regular blinds as they are sealed within the glazing unit, typically between two panes of glass, rather than mounted on the interior or exterior of a window. This design protects them from dust, damage, and wear, making them low-maintenance and long-lasting.

This overheating solution requires replacing a building's existing windows, making it a consideration for the landlord.



Electricals, HVAC, Equipment

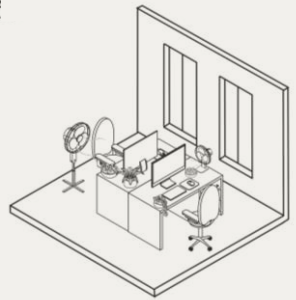
Electrical systems, HVAC (Heating, Ventilation, and Air Conditioning), and other office equipment play a crucial role in mitigating overheating in office buildings. Efficient HVAC systems regulate indoor temperatures and air quality, helping maintain thermal comfort during heatwaves. Electrical infrastructure supports smart technologies, like automated blinds, sensors, and energy-efficient lighting, which can reduce internal heat gain. Office equipment, including computers and printers, can generate significant heat, so managing their placement, usage, and cooling is essential. Together, these components form an integrated approach to controlling the office indoor climate, reducing energy consumption, and improving occupant wellbeing.



31 Install a ceiling fan for room cooling and ventilation

Ceiling fans facilitate ventilation and make the air feel cooler as it evaporates sweat from the skin. They're a cost-effective way to keep the air moving and reduce heat buildup.

Listed buildings will likely need to consult with the local heritage officer to determine whether installing a ceiling fan is permitted. The installation will generally be accepted if it does not damage or hide any significant architectural features within the building.



32 Buy a standing fan or table fan for localised cooling

Portable fans help circulate air in specific areas, providing a cooling effect where needed. For offices, this allows desk-level personal ventilation systems for targeted cooling towards employees that may feel the heat more than others.



33 Install energy and thermally efficient light bulbs and electrical appliances

Internal heat gains are generated by various sources within an office, such as people, electrical appliances, lighting, and other equipment that produce heat when present or switched on. Energy-efficient appliances and light bulbs produce less heat, helping to keep the office cooler.

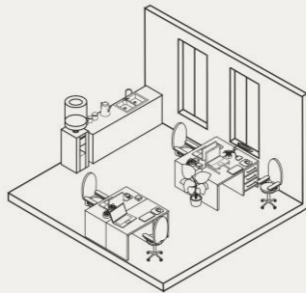
This can be installed as part of a CAT A fit out if the landlord wants to offer a higher-performance base building. This can also be installed by the tenant to upgrade their existing office setting.



34 Zonal lighting control so that only occupied areas are lit

Zonal lighting control ensures that only occupied areas of the office are lit, thereby minimising unnecessary heat generation from lighting fixtures. This targeted illumination lowers the overall heat load to maintain a more comfortable indoor temperature.

This can be installed as part of a CAT A fit out if the landlord wants to offer a higher-performance base building. This can also be installed by the tenant to accommodate their own office layout.



35 Use laptop docking stations instead of desktops

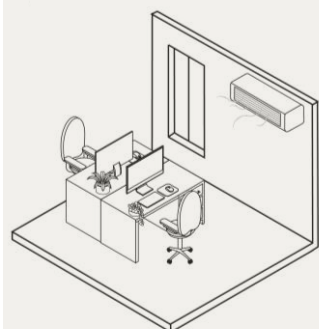
Laptops typically consume less energy and produce less heat than desktops, which have larger components and more powerful processors that emit more heat. This setup reduces the equipment heat gains in an office, contributing to a cooler environment.





36 Use task lighting instead of ceiling floodlighting

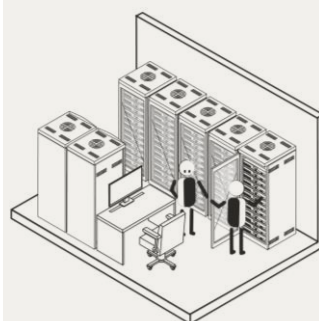
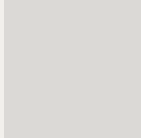
Task lighting focuses illumination directly on work areas, such as desks or meeting tables. This targeted approach reduces the need for high-output ceiling floodlights that illuminate the entire room, often unnecessarily. Task lighting lowers heat generation and allows for personalised lighting control to improve visual comfort and reduce glare.



37 Install mechanical ventilation with heat recovery (MVHR)

MVHR ensures night-time cooling and ventilation without opening windows. In the summer, the system bypasses heat recovery to bring in cooler air without adding heat, helping reduce indoor temperatures. This consistent airflow prevents heat buildup to maintain thermal comfort.

Listed building consent is required for installing MVHR in listed buildings and is unlikely to be accepted within building with “high quality historic interiors”⁵.



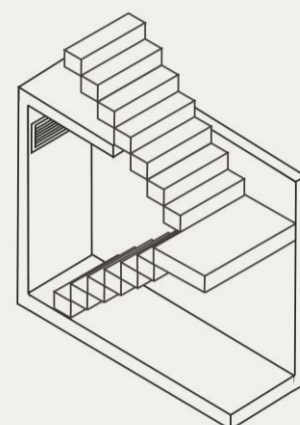
38 IT load management – shifting server rooms out of main office areas or relocating to cooler zones

Relocating server rooms away from main office areas or into cooler zones reduces overheating risk by removing a major source of heat (the electronic equipment) from occupied spaces. This helps maintain a more stable and comfortable indoor temperature and lowers the cooling demand on HVAC systems. It also ensures better thermal conditions for the servers themselves, reducing the risk of equipment failure.



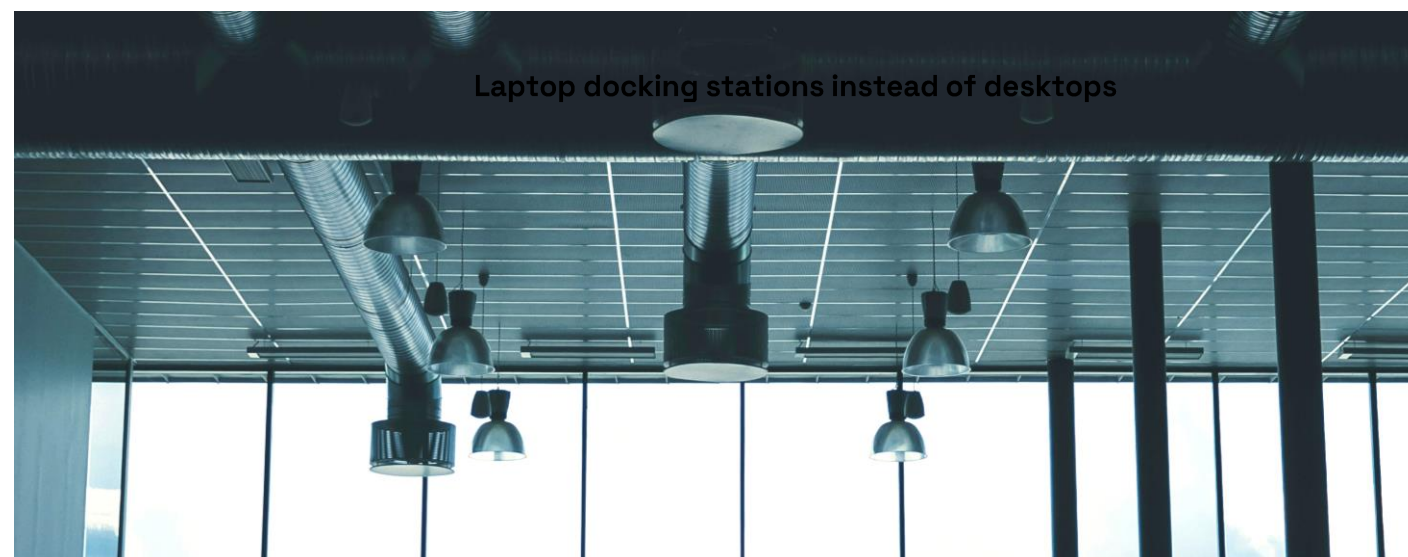
39 Upgrade the Building Management System (BMS) to optimise internal gains and cooling loads

Upgrading the BMS allows offices to better optimise internal heat gains and cooling loads, especially during warmer months. A modern BMS can monitor real-time data on occupancy, temperature, humidity, and equipment use, enabling smarter control of HVAC systems. The BMS can also facilitate night-cooling by optimising night-purge ventilation strategies using automated window actuators, fans, or mechanical ventilation to flush heat out before the day begins.



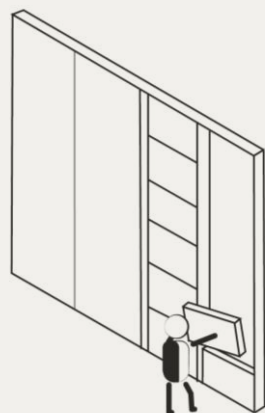
40 Install high-level opening vents in atria or stairwells

Installing high-level opening vents in atria or stairwells is an effective passive cooling strategy that helps offices manage indoor temperatures. These vents allow hot air, which naturally rises, to escape from the building, improving airflow and reducing heat build-up in communal areas.



Laptop docking stations instead of desktops

Walls and furniture

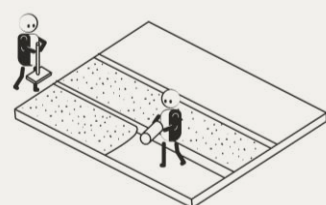


41 Add internal insulation to roofs/walls

Insulating the roof and walls helps keep the heat out in summer and the warmth in during winter. This makes the building more comfortable year-round while also reducing energy bills.

It's a significant, permanent upgrade for a landlord to carry out before leasing to tenants.

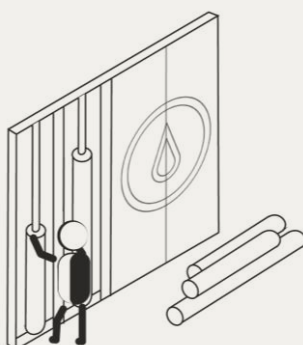
See pages 22-26 of [Historic England's](#) guidance document for more information on installing insulation in a listed building.



42 Increase the thermal mass of internal walls, floors, and ceilings

Increase the thermal mass by adding dense materials, such as hempcrete or concrete, which naturally store heat during the day and release it slowly at night. Night cooling, i.e., ventilating a building during the night to flush out heat that has accumulated during the day, is most effective in buildings with a high thermal mass.

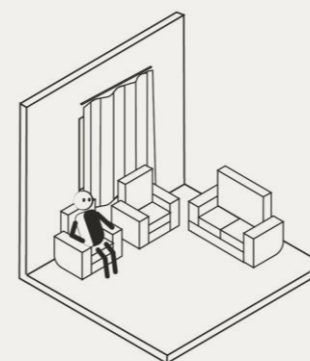
Thermal mass can be internal only; however, this is a significant structural change so ideally should be considered as part of a CAT A fit-out by Landlords.



43 Insulate hot water pipes and, if possible, any floors or walls they go under or behind

Insulating hot water pipes prevents them from heating the surrounding areas, which helps keep the building cooler. It's a simple way to reduce unwanted heat during the warmer months.

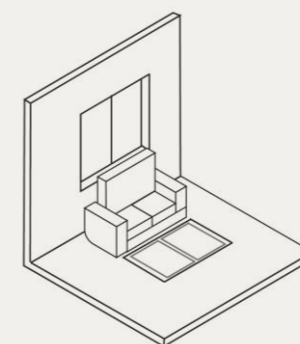
This work should be carried out as part of a CAT A fit-out by Landlords. It may be difficult to carry out these works in a listed building without intrusion.



44 Opt for light/neutral coloured furniture and finishes

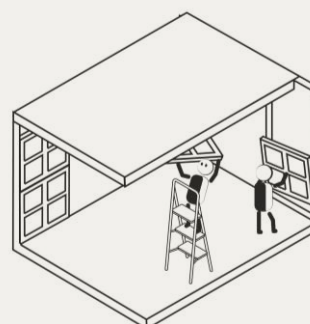
Light-coloured furniture and decorations absorb less heat than dark colours do, making a room stay cooler and more comfortable in the summer.

During a CAT B fit-out, tenants can consider opting for light-coloured furnishings, such as sofas, desks, walls, and shelves.



45 Buy a 'cool mat' for extreme heat situations

Cool mats provide relief during extreme heatwaves by creating a cooler surface to lie or sit on. They can be set out in communal areas within the office for employees to use.



46 Install phase-change material panels integrated into ceilings or walls

Phase-change material (PCM) panels integrated into ceilings or walls absorb heat during the day and release it at night. They improve the thermal mass without adding brick or concrete to improve temperatures, especially when combined with night-time cooling.

They can be part of a CAT A fit out to offer a higher-performance base building or be placed strategically by the tenant in areas with high thermal loads.



Behavioural Measures

This section provides guidance on behavioural and policy measures that offices can adopt to reduce overheating and improve employee comfort during heatwaves. It is essential for workplaces to implement practical, employee-focused strategies alongside technical solutions to support employee health, wellbeing, and productivity.

B1 Implement flexible dress code during the summer

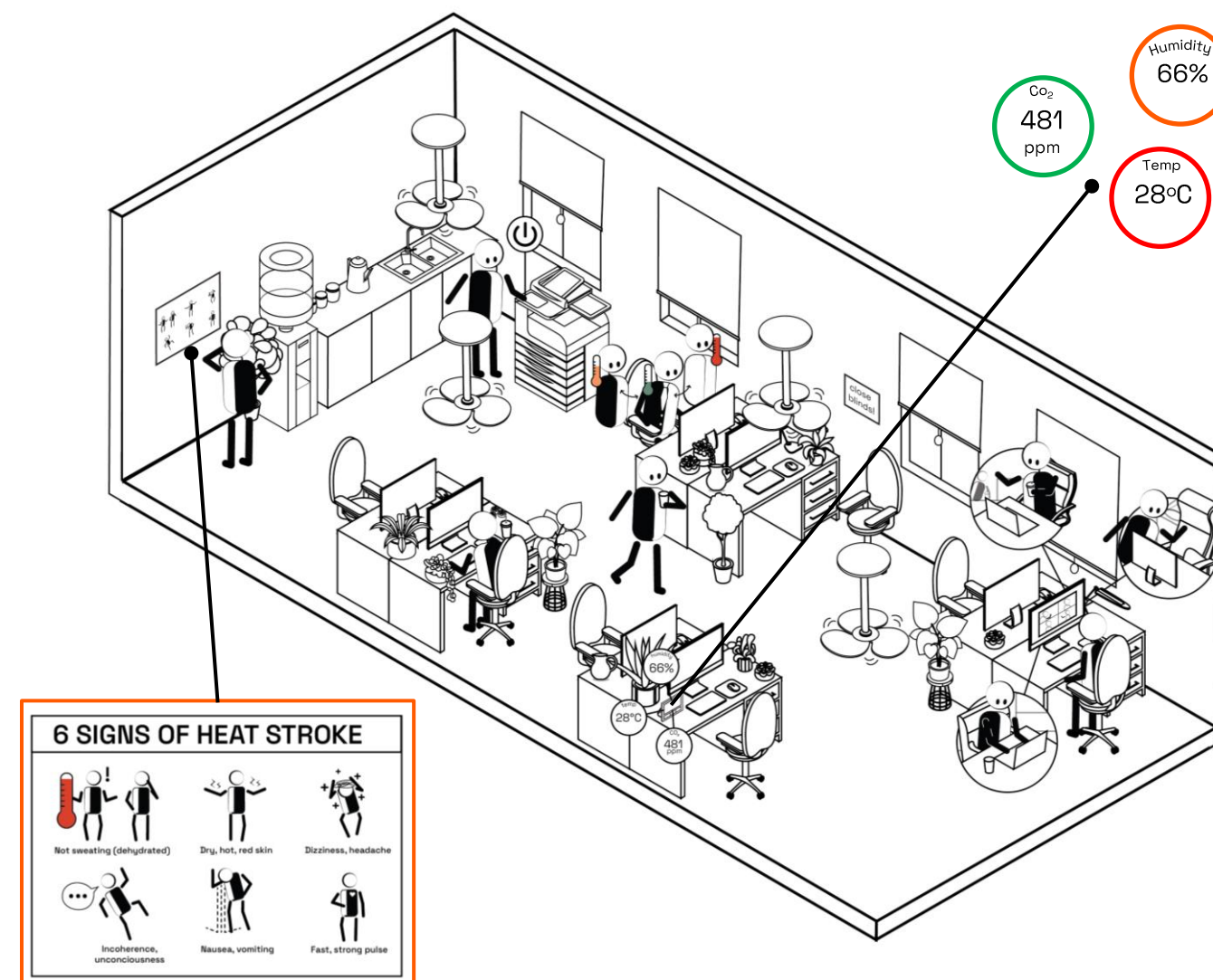
Implementing a flexible dress code in the summer helps employees stay comfortable and reduce the risk of heat stress, especially in offices with no air conditioning. Lighter and breathable clothing can also significantly improve employee wellbeing and productivity in warm conditions. This can be incorporated by updating dress code policies to allow casual attire during the summer while providing clear guidance on what's appropriate for a particular business.

B2 Add signage on walls to inform employees of heat risks

Offices should add clear signage to inform employees about heat risks and encourage a culture of care during the summer. Posters or digital displays can help employees recognise symptoms like dizziness, fatigue, or excessive sweating, and remind them to stay hydrated and take regular breaks. Signage should also promote looking out for more vulnerable colleagues, such as older staff, pregnant employees, or those with health conditions, by encouraging check-ins and supportive behavior.

B3 Inform employees how to use passive cooling measures effectively

Informing employees of how to use passive cooling measures effectively can include visual signage near windows and blinds explaining when to open or close them based on indoor and outdoor conditions. For example, opening windows in the early morning or evening for ventilation and closing blinds during peak sunlight hours helps reduce heat gain and removes heat build-up. This can also be paired with internal digital communications during the summer to reinforce these habits and build a shared sense of responsibility.



B4 Monitor real-time internal conditions

Monitoring indoor conditions, such as temperature, CO₂ levels, and humidity, in office spaces is essential for maintaining a healthy indoor environment. By tracking them continuously, managers and/or operation teams can respond quickly to worsening conditions by adjusting ventilation or cooling systems before conditions become unsafe or productivity declines. Real-time digital dashboards could be used to encourage responsive actions.

B5 Provide easy access to water stations

Offices should install more water dispensers, placed in accessible, high traffic areas, and ensure regular maintenance.

B6 Encourage staff to turn off unused equipment

Encourage staff to turn off unused equipment e.g., monitors and printers, as well as any task lighting to reduce internal heat gains. To promote this habit, tenants can put up reminder signage near workstations, implement automatic power-down settings on communal equipment, and put out digital communications highlighting the overheating and energy benefits of turning equipment off when unused.

B7 Adjust working hours

Adjust working hours to avoid peak heat times, especially in naturally ventilated offices. For example, employees can either:

- Start earlier and finish earlier.
- Start later and finish later.
- Start earlier and finish later, while taking an extended break in the middle of the day.

B8 Promote remote working during heatwaves

Allow employees to work from home during heatwaves, especially in naturally ventilated offices. Commuting can often be difficult during heatwaves due to public transport disruptions and uncomfortable temperatures, also making it potentially dangerous for more vulnerable employees.

B9 Set up heat alerts for operational staff

Offices can set up heat alerts from the Met Office to help operational staff prepare for and respond to extreme temperatures effectively. These alerts provide timely warnings about upcoming heatwaves, allowing teams to adjust work schedules, activate cooling strategies, and communicate safety guidance to employees. The heat alerts can also be integrated into internal communications and ensure responsibility is assigned to facilities, health and safety, or operational teams to monitor and act on the information.

B10 Designate a room in the office as a 'cool room' during heatwaves

Set up a 'cool room' in the office during heatwaves which provide employees with a comfortable space to escape the heat. These rooms should be equipped with as many of the adaptation measures listed in this guide, such as fans or air conditioning, good ventilation, access to drinking water, seating areas, and/or a cooling mat. Existing meeting rooms or quiet spaces can be designated for this purpose. The room availability should be clearly communicated through signage or internal messages.

B11 Rotating workstation policy away from sun-exposed areas

Allow hot-desking during peak heat periods to help employees that are usually sat directly adjacent to sun-exposed glazing. These desks can become significantly warmer, making it uncomfortable for employees and harder to concentrate. Identify cooler areas within the office and enabling flexible seating arrangements during heatwaves. Clear communication, desk booking systems, and signage can guide employees to shaded or better-ventilated areas.

B12 Create an overheating survey for employees

Create an employee survey to better understand the risks of overheating during commuting and work hours to identify practical ways to support employees. The survey can include questions about travel conditions, indoor comfort, and suggestions for improvements like flexible hours, remote work, or access to cool spaces. Gathering this feedback allows targeted interventions to be made for employees to support them during heatwaves.

B13 Create an Office Overheating Policy

Create an office overheating policy to ensure a consistent and proactive approach to managing heat risks and protecting employee wellbeing. The policy should outline clear procedures, such as those set out in this guide, including monitoring indoor conditions, adjusting work arrangements, dress code, and communicating heat alerts. By formalising these practices, businesses can demonstrate their commitment to safeguarding their employees. The overheating policy can also be informed by the results of the employee survey.

Further guidance is provided overleaf.

Creating an Office Overheating Policy

See [Love Design Studio’s Office Overheating Policy](#) to inform your own approach or get in touch to receive a templated version. Suggested content within the office overheating policy is provided below.

1. Purpose

Outline the rationale behind the policy, emphasising the growing frequency and impact of heatwaves. Set out goals to protect staff wellbeing, maintain business continuity, and ensure proactive planning for both office and home working environments.

2. Monitoring Internal Conditions

Describe how indoor conditions will be monitored using sensors that track temperature, humidity, CO₂, and air quality levels. Encourage staff to report discomfort even before the thresholds are met.

3. Temperature Response Thresholds

Define specific temperature thresholds and corresponding actions. For example:

- 18-26°C - normal operations.
- 26-36°C - remote-first work.
- 36°C+ potential office closure.

4. Heat Resilience Onboarding Toolkit

Outline a checklist as part of an employee’s onboarding or annual review to assess each employee’s work-from-home/remote setup for heat resilience. Ensure that employees have access to cool rooms, passive cooling measures, and nearby alternatives like libraries or cafés to work from comfortably.

Explore commuting risks and personal circumstances that may affect an employee’s heat vulnerability. This information can be used to tailor individual response plans and ensure early support and safe alternatives are in place during a heatwave.

5. Advanced Planning

Emphasise the importance of proactive planning to prevent uncertainties. Agree on personal actions and fallback arrangements in advance, with managers briefed to support quick decision-making.

6. Equity and Sensitivity

Acknowledge that heat affects individuals differently based on health, age, pregnancy, or caring responsibilities. Encourage flexible adjustments without waiting for formal triggers and promotes one-on-one support from managers.

7. Communication

Detail how the Operations Team monitors conditions and communicates decisions. Employees should be empowered to act independently if they feel unsafe, with expectations to inform their line manager promptly.

8. Site Visits and External Events

Introduce a formal risk assessment process for site visits when a certain temperature threshold is reached e.g., 32°C or above. Include criteria for evaluating safety and making adjustments for the site visit timing or format. List considerations for site visits, such as travel, shade, water access, PPE, and time of day, and outline possible mitigation strategies. Reinforces that no staff member should attend a site or event in unsafe conditions.

9. Review and Continuous Improvement

Explain that the policy is reviewed annually or after major heat events. Staff feedback and temperature data should inform updates, with anonymous suggestions welcomed through feedback tools or managers.



References

1. [London Climate Resilience Review Interim Report](#)
2. [A tenth of UK electricity used for air conditioning - CIBSE Journal](#)
3. [Heat mortality monitoring report: 2022](#)
4. [The effect of indoor office environment on the work performance, health and well-being of office workers – PMC](#)
5. [HEAG321 Adapting Historic Buildings for Energy and Carbon Efficiency](#)

Special thanks to delivery partners [Love Design Studio](#) for their technical input and review.

Further Resources

Sign up for [heat-health alerts](#) by the Met Office to receive notifications of an upcoming heatwave.

Advice on [taking care during a heatwave](#)

To create a bespoke overheating policy or adaptation plan for your office, contact info@shadetheuk.co.uk